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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,645	09/29/2004	Jerry Karlsson	7589.207.PC'US00	5644
65858 7590 03/05/2009 NOVAK DRUCE AND QUIGG LLP (Volvo) 1000 LOUISIANA STREET FIFTY-THIRD FLOOR HOUSTON, TX 77002				
EXAMINER				
MAZUMDAR, SONYA				
ART UNIT		PAPER NUMBER		
1791				
MAIL DATE		DELIVERY MODE		
03/05/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/711,645

**Applicant(s)**

KARLSSON ET AL.

**Examiner**

SONYA MAZUMDAR

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 27, 29, 31-36, 39-45 and 47-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27, 29, 31-36, 39-45 and 47-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 21, 2009 has been entered.

***Response to Amendment***

2. The amendment to the specification, filed January 21, 2009, has been acknowledged.

***Response to Arguments***

3. In light of the cancellation of claim 38, the rejection under 35 USC 112, 2<sup>nd</sup> paragraph has been withdrawn.

4. In light of the cancellation of claims 28, 30, 37, 38, and 46, the rejections under 35 USC 102(b) and 35 USC 103(a) have been withdrawn.

5. Applicant's arguments with respect to claims 27, 29, 33-36, 39-45, and 47-50 have been considered but, in light of amendments, are moot in view of the new grounds of rejection.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claim 27, 29, 34, 40, 42, 44, 45, 47, 48, 50, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable by Sobolev (US 5,030,488) in view of Mesek (US 3,975,222), Otomine et al. (US 4,142,929), and Anderson et al. (US 3,684,637).

With respect to claims 27, 29, 47, and 48, Sobolev teaches a method for producing laminates comprising two metal sheets with fibrous core made of metallic fibers. Before the two sheets are joined together, one cover sheet is applied in certain areas with adhesive and fibers, both metallic and non-metallic (abstract; column 8, lines 17-22; column 11, lines 38-62; Figures 1A and 1B).

Sobolev does not specifically teach applying fibers and adhesive separately. However, it would have been obvious to do so to keep fibers aligned in substantially parallel form, as Anderson et al. teach a method for producing a laminate, where before two cover sheets are joined together, one cover sheet (19) is applied with adhesive (23), and the other cover sheet (40) is initially applied with adhesive (42), fed from a supply source (43) and through a nip formed by a metering roll (44) and an applicator roll (45). Fibers of different kinds (52) are applied onto the cover sheet (40) from a flock supply (53) (abstract; column 1, lines 59-61; column 2, line 13 –column 3, line 60; column 4, lines 50-67; Figure 2). Also, especially with respect to claim 29, fiber properties such as density, thickness, length, and orientation relative to the cover sheets are important to consider when producing a laminate with specifically desired characteristics (Anderson: column 1, lines 38-39; column 3, lines 26-36; column 4, lines 50-68). It would thus be obvious to one of ordinary skill in the art to vary the fibers to achieve desired properties in the laminate.

Although Sobolev in view of Anderson et al. teach that adhesive may be applied by various methods to create a pattern on a cover sheet (Anderson: column 5, lines 44-50), the teachings do not specifically disclose applying adhesive in a pattern in a discontinuous manner comprising cavities/channels free of adhesive or "islands" of adhesive. However, it would have been obvious to do so as Mesek teaches applying lines or beads (22) of adhesive to an impervious sheet (12), as an alternative to a continuous layer, to prevent excessive stiffness in the case if adhesive is applied as a continuous layer, and also create substantial space in which air or liquid can pass through (column 8, line 58 – column 9, line 7). Furthermore, Otomine et al. teach alternative methods of silk screening and spraying an adhesive layer to a metal foil (column 1, lines 63-67; column 4, lines 3-9) to form any complicated graphic to place fibers on.

With respect to claim 40, Sobolev in view of Anderson et al., Mesek, and Otomine et al. teaches applying a mixture of metallic and non-metallic fibers (Sobolev: column 11, lines 41-44 and lines 59-62).

With respect to claim 42, Sobolev in view of Anderson et al., Mesek, and Otomine et al. teach teaches applying fibers through an air stream, which may be of increasing and decreasing fiber content across the stream (Mesek: abstract; column 9, lines 48-51) to make a flexible laminate with loosely compacted fibers.

With respect to claims 44 and 45, Sobolev in view of Anderson et al., Mesek, and Otomine et al. teaches transferring a fibrous layer (3) from a base (1) to a substrate (7), and then removing the base (Otomine: Figures 1-3).

With respect to claim 50, Sobolev in view of Anderson et al., Mesek, and Otomine et al. teaches a method of electrostatic flocking as an alternative to mechanically applying fibers (Anderson: column 4, line 68 – column 5, line 4).

8. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable by Sobolev in view of Barnes (US 3,850,659).

Sobolev teaches a method for producing laminates comprising two metal sheets with fibrous core made of metallic fibers. Before the two sheets are joined together, one cover sheet is applied in certain areas with a mixture of adhesive and fibers by a spray nozzle. The laminate is heated after joining the two sheets (abstract; column 8, lines 17-22 and lines 63-68; column 11, lines 38-61; column 32, lines 40-41; Figures 1A and 1B).

Sobolev does not teach fixing fibers by inductive stitch welding. However, it would have been obvious to one having ordinary skill in the art to do so in the invention of Sobolev, as Barnes et al. teach the flocking of metal articles, to ensure the fibers are set and locked to the surface of the metal article, by inductively heating the article, after electro statically attracting and applying the fibers to the article (abstract; column 1, line 66 – column 2, line 2; column 5, lines 1-3).

9. Claims 33, 35, 54, 57, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable by Sobolev in view of Mesek.

Sobolev teaches a method for producing laminates comprising two metal sheets with fibrous core made of metallic fibers. Before the two sheets are joined together, one cover sheet is applied in certain areas with a mixture of adhesive and fibers, both

metallic and non-metallic, by a spray nozzle (abstract; column 8, lines 17-22; column 11, lines 38-62; Figures 1A and 1B).

Sobolev does not specifically teach applying adhesive in a pattern in a discontinuous manner comprising cavities/channels free of adhesive or "islands" of adhesive. However, it would have been obvious to do so as Mesek teaches applying lines or beads (22) of adhesive to an impervious sheet (12), and thus adhering fibers to the patterns of adhesive, as an alternative to a continuous layer, in order to prevent excessive stiffness in the case if adhesive is applied as a continuous layer, and also create substantial space in which air or liquid can pass through (column 8, line 58 – column 9, line 7).

10. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Mesek, as applied to claim 33 above, and further in view of Gregorian et al. (US 4,035,532)

The teachings of claim 33 are as described above.

Sobolev in view of Mesek does not teach using a foamed adhesive, applied substantially in dots. However, it would have been obvious to use a foamed adhesive, as Gregorian et al. teach a method of transferring flock from a temporary substrate to a main substrate, by using a foamed adhesive at a desired viscosity to adhere the flock onto the main substrate (column 2, lines 3-9; column 4, lines 10-22; Figure 2) to impart breathability to the main substrate with the adhesive's inherent porosity.

11. Claims 39 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Anderson et al., Mesek, and Otomine et al., as applied to claim 27 above, and further in view of Anderson (US 3,616,007).

The teachings of claim 27 are as described above.

Sobolev in view of Anderson et al., Mesek, and Otomine et al. does not specifically teach steps of both pre-curing and final curing an adhesive layer. However, it would have been obvious to do so, as Anderson ('007) teaches softening and reactivating an adhesive material by heat before application of fibers and final curing the adhesive before rolling a laminate up for storage (column 4, lines 16-29), to partially embed fibers after pre-curing an adhesive and produce a useable product in a final curing of the adhesive.

12. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Anderson et al., Mesek, and Otomine et al., as applied to claim 27 above, and further in view of Abrams et al. (US 5,858,156)

The teachings of claim 27 are as described above.

Sobolev in view of Anderson et al., Mesek, and Otomine et al. does not teach applying fibers in the form of a positive/negative pattern onto a cover sheet. However, it would have been obvious to do so, as Abrams et al. teach electrodepositing flock, as an alternative method in adhering flock to a sheet, by passing a sheet between potentials of a high voltage electrostatic field, and an electrode is used to give flock a charge and become aligned with the electrical field lines of force (column 5, lines 40-61; column 6, lines 13-35).



13. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Anderson et al., Mesek, and Otomine et al., as applied to claim 27 above.

The teachings of claim 27 are as described above.

Sobolev in view of Anderson et al., Mesek, and Otomine et al. teaches using a wide variety of adhesives (Anderson: column 5, lines 14-44).

Applicant also admits that the kind of the adhesive used is substantially determined by the kind of application, the later use of the composite layer structure and especially by the desired properties like for example the stiffness or flexibility, strength and so on, as well as the kind and distribution of the flock fibers (Applicant's specification: paragraph 59). These factors would have been obvious to one having ordinary skill in the art in selecting the proper adhesive which may be achieved in the course of routine experimentation, by reference to standard technical literature (e.g., Adhesive Age trade magazine, Adhesive Handbook), or through consultation with industrial or specialty adhesive suppliers (e.g. Dupont, Dura, Loctite, Lord, etc.).

14. Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Mesek, as applied to claim 33 above, and further in view of Coffey et al. (US 3,764,067)

The teachings of claim 33 are as described above.

Sobolev in view of Mesek does not teach applying a mixture of fibers and adhesive by screen printing. However, it would have been obvious to do so, as Coffey et al. teach screen printing as a well-known alternative to spraying, which has already been taught by Sobolev (Coffey: column 1, lines 13-17).

15. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Anderson et al., Mesek, and Otomine et al., as applied to claim 27 above, and further in view of Gregorian et al.

The teachings of claim 27 are as described above.

Sobolev in view of Anderson et al., Mesek, and Otomine et al. does not teach using a foamed adhesive, applied substantially in dots. However, it would have been obvious to use a foamed adhesive, as Gregorian et al. teach a method of transferring flock from a temporary substrate to a main substrate, by using a foamed adhesive at a desired viscosity to adhere the flock onto the main substrate (column 2, lines 3-9; column 4, lines 10-22; Figure 2) to impart breathability to the main substrate with the adhesive's inherent porosity.

16. Claims 55 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Mesek, as applied to claim 33 above, and further in view of Abrams et al. (US 5,858,156)

The teachings of claim 33 are as described above.

Sobolev in view of Mesek does not teach applying fibers in the form of a positive/negative pattern onto a cover sheet. However, it would have been obvious to do so, as Abrams et al. teach electrodepositing flock, as an alternative method in adhering flock to a sheet, by passing a sheet between potentials of a high voltage electrostatic field, and an electrode is used to give flock a charge and become aligned with the electrical field lines of force (column 5, lines 40-61; column 6, lines 13-35).

17. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Mesek, as applied to claim 33 above, and further in view of Anderson (US 3,616,007).

The teachings of claim 27 are as described above.

Sobolev in view of Mesek does not specifically teach steps of both pre-curing and final curing an adhesive layer. However, it would have been obvious to do so, as Anderson teaches softening and reactivating an adhesive material by heat and final curing the adhesive before rolling a laminate up for storage (column 4, lines 16-29), to eventually produce a useable product after a final curing of the adhesive.

18. Claim 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Mesek, as applied to claim 33 above.

The teachings of claim 33 are as described above.

Applicant also admits that the kind of the adhesive used is substantially determined by the kind of application, the later use of the composite layer structure and especially by the desired properties like for example the stiffness or flexibility, strength and so on, as well as the kind and distribution of the flock fibers (Applicant's specification: paragraph 59). These factors would have been obvious to one having ordinary skill in the art in selecting the proper adhesive which may be achieved in the course of routine experimentation, by reference to standard technical literature (e.g., Adhesive Age trade magazine, Adhesive Handbook), or through consultation with industrial or specialty adhesive suppliers (e.g. Dupont, Dura, Loctite, Lord, etc.).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SONYA MAZUMDAR whose telephone number is (571)272-6019. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Tucker can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SM

/Philip C Tucker/  
Supervisory Patent Examiner, Art Unit 1791